

# **DG-1145: Combined License Applications for Nuclear Power Plants (LWR Edition)**



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# DG-1145 Development

- NRC staff drafting sections of DG-1145
- When section drafted, placed on NRC web site as “draft work-in-progress
- Public workshop agenda based on sections posted on web when meeting is noticed
- Public comments documented and used in development of guide
- 8 of 43 sections posted on web as of April 10
- Goal: Issue DG-1145 in June 2006

# Purpose of DG-1145 Workshops

- Discuss DG-1145 sections posted on web
- NRC staff present portions of following Sections as they are developed
  - C.III.1: Portions of safety analysis report (SAR) not addressed by a certified design
  - C.III.2: Portions of SAR not addressed by a early site permit
  - C.III.5: Design Acceptance Criteria
- Discussion of SRP update as it relates to COL applications
- Other relevant topics as identified by both workshop attendees and NRC staff

# Future DG-1145 Workshops

- May 17 - 19, 2006
- June 13 - 14, 2006
- July 11 - 12, 2006 \*
- August 8 - 9, 2006 \*
- September 6 - 7, 2006 \*

Additional meetings as necessary to support  
development of DG-1145

*\* tentative date*

# DG-1145 Website

- Background
- Table of Contents with links to available chapters
- Public involvement information
- Link to “Contact Us” page
- Information on past and upcoming meetings

# Workshop Comments

- Approximately 100 public comments from March 15 workshop
- Comments sorted into 6 bins
  1. DG-1145 process development
  2. Part 52 Rulemaking
  3. COL Application timing
  4. Inspection
  5. DG-1145 development
  6. Standard Review Plan (SRP) update

# Public Comments on DG-1145

- The public is encouraged to use the “Contact Us” page on the NRC website
- Public comments on a specific section will be discussed when that section is presented during the workshop
- Bin 5 comments will be part of DG-1145 in section C.IV.11, “Response to Public Comments on Work-in-Progress Sections of DG-1145
- Comments associated with SRP sections may also be submitted

# Comment Resolution Process

- Sections of DG-1145 will be placed on the website
- Staff will try to address comments received three days before monthly workshop during the workshop
- All comments will be posted on NRC website before next meeting



# Comment Resolution Process

- The responses to Bin 1 and Bin 5 comments will be posted on the website the week of subsequent public meeting
- The comments in the other bins will be discussed as necessary
- Staff will forward SRP comments to the technical review branches

# DG-1145, Section C.III.5

## Design Acceptance Criteria (DAC)

- Four DACs granted in previous certified designs:
  - Instrumentation and Controls
  - Human Factors Engineering
  - Piping
  - Shielding
- DAC are Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)
  - Process for completing design
  - No requirement to address in COL application
  - Deviation from process after COL issued represents huge risk and uncertainty

# Treatment of DAC in DG-1145

- Section C.IV.7, Pre-Application Activities, encourages engaging NRC on DAC
- Section C.III.5 will provide a generic listing of topics that need to be addressed for the staff to review the design issues associated with DAC
- Associated ITAACs may be closed in review of COL application
- COL applicant has discretion on what to include in COL application concerning DAC

# DG-1145/SRP Update Integration

- Reorganization so both activities reside within same branch
- Request when staff update DG-1145, they consider the update to corresponding SRP sections – especially acceptance criteria
- During DG-1145 comment period - solicit stakeholder comments on related SRP sections
- Use of DG-1145 Category 3 meetings as opportunity for breakout meetings to discuss both DG-1145 and related SRP sections for given technical areas
- Ensure availability of draft sections of DG-1145 to project manager involved with the corresponding SRP section updates and the technical staff if different than those involved in the in DG-1145.

# DG-1145/SRP Update Integration, Continued

- Leverage work on DG-1145 in update of SRP
  - Consideration of amount of information needed to “fully describe” operational programs will be factored into applicable SRP sections
  - Help with understanding relationship between licensing and inspection
  - Organization of SRP sections will be informed by DG-1145
- SRP of record – the broad topic of “timing” to be discussed in Section C.I.1 of DG-1145
- Conformance with SRP will also be discussed in C.I.1.
- Considering opportunities to accelerate the schedule
- Considering how to “risk-inform” update process

# Process to Identify COL Review Areas

- Complete Part I Section (2-18)
- Identify topics not reviewed in a design certification
  - Includes COL items that need to be addressed in NRC safety evaluation report (SER)
- Identify information needs to review these topics
- Identify whether this information needs to be submitted with application or whether COL applicant has option to make information available for audit such that NRC can make conclusions in SER
- Applicable to Sections C.III.1, C.III.2, and C.III.5

## DG-1145, Section C.I.4: Reactor

- Describe any changes to the reference design of the fuel, burnable absorber rods, rod cluster control assemblies, or initial core design from that presented in the DCD.
- Following selection of the actual plant operating instrumentation and calculation of the instrumentation uncertainties of the operating plant parameters, calculate the design limit departure from nucleate boiling ratio (DNBR) values using the revised thermal design procedure with these instrumentation uncertainties. Demonstrate that either the design limit DNBR values remain valid, or that the safety analysis minimum DNBR bounds the new design limit DNBR values plus DNBR penalties, such as the rod bow penalty.

## DG-1145, Section C.I.4: Reactor

- Describe the materials and processes of construction which will be used for the reactor vessel internals, demonstrating that the facility will be consistent with the technical information reviewed in the DCD.
- Describe the program designed to ensure that aging of the reactor internals will be adequately managed for the licensed life of the facility. Also describe the implementation of this program.



# DG-1145, Section, C.IV.4

## Operational Programs

- Implementation of SECY-05-0197, Review of Operational Programs in a Combined License Application and Generic Emergency Planning Inspections, Tests, Analyses, and Acceptance Criteria
- Associated staff requirements memorandum approved SECY-05-0197 and instructed the staff to report to the Commission when:
  - Staff identified new operational programs
  - When a COL applicant chooses to use an operational program to meet a regulatory requirement when the requirement does not call for an operational program, and that program is added to the license conditions for that COL

# Section C.IV.4 Public Comments

- Why is the Operational Reliability Assurance Program not an operational program?
- Define “fully describe”
- Expansion of scope of operational programs
- ITAAC option for operational programs
- Using “shall” to describe implementation of SECY-05-0197 in DG-1145
- Information needed to “fully describe” operational program in SAR
  - Current operating plant SARs typically do not provide the information that the NRC would need to make a reasonable assurance finding in a COL application review